

Mount Wachusett Community College

Sustainability Plan



Date: 4/6/05

Agency Coordinator: Jody Paul Director Of Facilities Operations

Phone: 1-978-630-9337

Email: j_paul@mwcc.mass.edu

This Sustainability Plan has been reviewed and approved by

(Edward R. Terceiro, Jr.) (Executive Vice President)

(Mount Wachusett Community College) on (4/6/05).

Edward R. Terceiro Jr. Executive Vice President / Jody James Paul Director Facilities Operations

Signature of Agency Head or other Appropriate Designee

1. Agency Information, Impact Identification and Sustainability Team

1.1 Agency Description and Scope

Located in Gardner, Massachusetts, the main campus of Mount Wachusett Community College occupies a two hundred and sixty nine acre site and is comprised of three buildings totaling approximately four hundred thousand square feet. Additionally, the College leases facilities in Leominster, Devens, and Orange that function as satellite campuses.

Six hundred and sixty full and part-time employees provide educational opportunities to three thousand-eight hundred and fifty full, part-time, and non-credit students. The primary focus of the College is to provide quality education to all applicants at reasonable costs.

1.2 Agency Impacts on the Environment and Human Health

As a large facility, the College consumes a significant amount of natural resources for heating, light, operations, and lawn maintenance. Additionally the College has both hazardous and non-hazardous waste streams. Following are approximate quantities of these items.

1.3 Agency Operational Costs

| ITEM | VENDOR | VOLUME | COST | NOTES |
|---------------------------------------|---------------------------------|--------------|------------------------|--------------------------------|
| Electric Supply | Mass Electric | KWHrs | \$607,821.37 | Sustainability |
| Fuel Oil/#2 | Global Montello | Gallons | \$17,699.64 | Tracking Report |
| Wood Chips | Hull Forest Prod. Inc | Tons | \$32,568.69 | Sustainability |
| Normal Waste | Waste Management | Tons | \$11,351.20 | Tracking Report |
| ITEM | VENDOR | VOLUME | COST | NOTES |
| Electric Recycling & Mercury Disposal | Institutional Recycling Network | Dues Tons | \$750.00 \$1,269.23 | Sustainability Tracking Report |
| Hazard Waste | Triumvirate Environmental | Pounds | \$11,172.27 | Sustainability |
| Metal Recycle | Institutional Recycling Network | Tons | \$2,379.50 | Tracking Report |
| Paper/Cardboard Recycle | Waste Management | Tons | \$2,235.50 | Sustainability |
| Water/Sewer | City of Gardner | Gallons | \$16,806.68 | Tracking Report |
| Gasoline/Diesel | Montouri Gasoline | Gallons | \$14,551.94 | Sustainability |
| Propane | Osterman Propane | Pounds | \$2,235.50 | Tracking Report |

1.4 Agency Sustainability Team Members

The significant staff members with the sustainability effort are:

- Edward R. Terceiro, Jr., Executive Vice President
- Jody J. Paul, Director Of Facilities Operations
- William Swift, Director Of Facilities Maintenance
- David Pouliot, part time Facilities Director
- The members of the Facilities Management Department

2. Long-Term Goals/Vision

Refer to "Road Map Step 2: Broadly Define Long-term Goals" before writing this section of the Plan.

2.1 Long-Term Goals

Mount Wachusett Community College has been very proactive in the areas of resource conservation and environmental law compliance. Beginning in the late 1990's and continuing through today, the College has undertaken many projects that attain the goals set forth in a sustainability effort. These include but are not limited to:

1. Replacement of our aging chiller plants which used CFC refrigerants with units that use HCFC's. Where applicable, variable frequency drives were installed on these units for energy conservation.
2. Installation of a new energy management system which provides better heating and cooling controls along with such features as a night time temperature set-backs, lighting controls, and variable air volume heater distribution.
3. Installation of variable frequency drives on most of our fan coil units for energy efficiency.
4. Implementation of a performance based contract through DCAM which:
 - a. Constructed a wood chip burning plant
 - b. Converted approximately 60% of the College's electric resistance heating and direct expansion air conditioning system to a centralized hydronic system utilizing wood chips as a heat source and the new efficient chiller plant as a cooling source.
 - c. Conversion of the lighting system to high efficiency T8 and compact florescent components with non PCB ballasts.
 - d. Installation of additional variable frequency drives.
 - e. Installation of low flow aerators on faucets and flush-o-meters for water conservation.

Future plans currently in various stages of implementation include:

1. Installation of a small co-generation unit (test sight) which uses wood chips as a fuel source and generates up to 75 kilowatts of electrical power along with using exhaust for heating and cooling.
2. Construction of a new child day care center utilizing the latest "green" construction concepts.
3. Conversion of many of the College's electric resistance sill line heaters to hydronic/fin tube heating.
4. Installation of wind mills for electrical generation.
5. Changing the current swimming pool filtration system to one which would use less water.

3. Short-term Actions and Priorities

3.1 Priority and Areas Goals

- a. Installation of a 75 KW con-generation plant

- b. Conversion of the swimming pool filtration system
- c. Utilization of more environmentally friendly cleaning products
- d. Increase, where feasible, the College's recycle and reuse effort
- e. Carry out "green" design in the Child Care Center

3.2 Agency Action Steps

MWCC has been working with the Bio Mass Association, Mass Electric, and NORESO for ways in reduce or change our consumption of energy

PLEASE REFER TO APPENDIX 4 FOR THE LIST

4. Management Systems and Institutionalization

4.1 Integrating Environmental Impacts into Key Decision Points

The sustainability team at MWCC meet on a quarterly basis to go over ways to improve not only what we are doing but also what we can do in the future to conserve, reuse, recycle and change.

4.2 Education and Training of Staff

The Director of Facilities Operations

- completed Environmental Technology Certificate from University of Mass/Lowell;
- 40 hours of Hazardous Waste Site Worker Course with annual 8 hour refreshers.
- Hazardous Waste Management Training RCRA/DOT Refresher, and
- Working towards United States Department of Labor Certificate in Training The Trainer as well as a Certificate in Safety & Health for General Industry

We not only train in-house but also have periodic training from outside organizations.

4.3 Management Systems

We do not have an official EMS plan. The Director of Facilities Operations, Director of Maintenance, and the Maintenance staff meet on a regular basis and keep track of our sustainability efforts and to address issues as they arise.

5. Tracking Progress and Program/Plan Review

5.1 Agency Tracking and Reporting Form

We will submit all tracking and reporting forms as they are due.

5.2 Continuous Improvement

The Director of Facilities Operations, Director of Maintenance, and the Maintenance staff meet on a regular basis and keep track on what is happening and fix any issues before they become problems

Appendix 4 - Agency Sustainability Workplan Worksheet

For Use in Section 3 of the *Agency Plan Template* "Short Term Actions and Priorities" and should be submitted as part of the agency plan.

This worksheet is intended to help agencies develop an action plan to help identify the key sustainable activities the agency wants to address, as well as identify the key staff necessary to ensure program success. The information provided here is for sample purposes only

| Sustainable Goal | Benefits | Specific Tasks | Responsible Staff | Timeline |
|--|---|---|---|---|
| Co-generation | Generate electricity Use exhaust gas for heating & cooling | <ul style="list-style-type: none"> Complete design package Install equipment & make modifications to the existing physical plant Put on line and test | Executive Vice President Director of Maintenance & Mechanical Systems | by July 1, 2005 by October 1, 2005by January 1, 2006 |
| Pool filtration conversion | Less water consumption Less impact to city waste water | <ul style="list-style-type: none"> Contact vendors to assess alternatives Based on above complete design of modification Bid and carry out conversion project | Director of Facilities Operations Director of Maintenance & Mechanical Systems | by January 1, 2006 by July 1, 2006 by January 1, 2007 |
| Environmentally friendly cleaning products | Less hazardous chemicals Less personnel exposure | <ul style="list-style-type: none"> Work with vendors to test and ultimately purchase new products Attend seminars and workshops, when available, to investigate new opportunities | Director of Facilities Operations | ongoing |
| Increase recycling and re-use efforts | Less solid waste Less Greenhouse gases | <ul style="list-style-type: none"> Work with the Institution Recycling Network to take advantage of new opportunities Increase the use of paper products with recycled content | Director of Facilities Operations & Maintenance Staff | ongoing ongoing |
| Green Design-Child Care Center | Cost effective Less heating and cooling needed | <ul style="list-style-type: none"> Work with the designer and DCAM to incorporate green design concepts in the new building Complete construction and occupancy of the facility | Executive Vice President Director of Maintenance & Mechanical Systems Director of Facilities Operations | by July 1, 2005 by April 1, 2006 |

